10. HANAUVISION

10.3 Installing HANAUVISION on the separate carrying arm

10.3.1 scope of supply

Basic installation:
- 1 cable set for ceiling
- 1 Ceiling cover
- 1 Cable set for central axle
- 1 Central axle
- 1 Stop bolt
- 1 Semi-circular bracket with signal cable
- 1 HANAUVISION Sat spring-arm
- 1 Extension-arm
- 1 Terminal block

Supplementary accessories:
- 1 Camera
- 1 Plastic housing with bracket
- 1 Control unit, with connection

10.3.2 Installing the flange tube

For details of how to install the flange tube please see the separate HANAULUX 2000 Installation Instruction, Chapter 2.1.

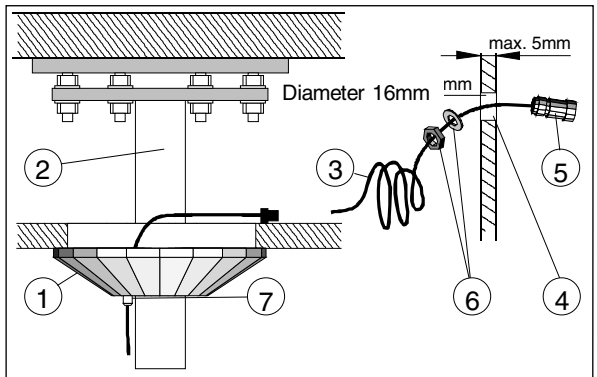
10.3.3 Installing the ceiling cover

For details of how to install the ceiling cover please see the separate HANAULUX 2000 Installation Instructions, Chapter 1.1.

10.3.4 Laying the ceiling cable

Fig. 10.3-1

1. Drill two 16mm holes at the connection point for the control unit and at the lower edge of the **ceiling cover (1)** next to the **flange tube (2).**
2. Gently pull the **signal cable (3)** through the **drill hole (4)** and screw **signal cable connector (5)** with washer and **nut (6)** together from opposite side.
3. Pull the signal cable gently through the drill hole in the ceiling cover and secure with the **screw fastening (7)**.



1 Ceiling cover
2 Flange tube
3 Signal cable
4 Drill hole
5 Signal cable connector
6 Washer and nut
7 Screw fastening for cable

Fig. 10.3-1: Installing the ceiling cable

10.3.5 Installing the central axle to the flange tube

For details of how to install the central axle please see the separate HANAULUX 2000 Installation Instructions, Chapter3.1.

ATTENTION!
A stop bolt must be installed in the central axle. Please install it before proceeding with the camera installation.

10.3.6 Installing the extension-arm to the central axle

For details of how to install the extension-arm to the central axle please see The separate HANAULUX 2000 Installation Instructions, Chapter 4.1.

10.3.7 Installation of the semi-circular bracket to the spring-arm **Fig. 10.3-2**

COMMENT!

Please observe procedure:
The semi-circular bracket is supplied with the signal cable already installed and must be immediately mounted to the spring-arm.

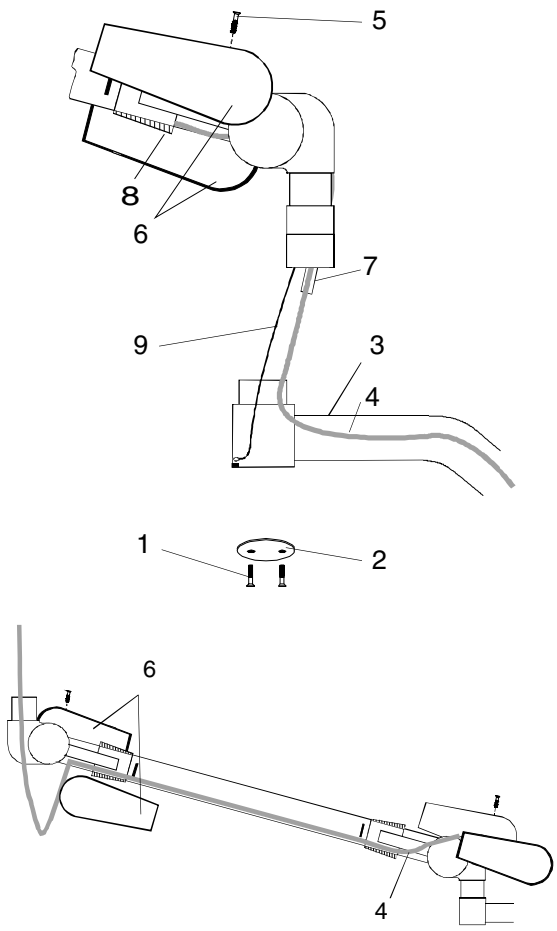
1. Loosen **fixing screw (1)** and remove **round cover (2)** from **semi-circular bracket** (3).
2. Loosen **screw (5)** and remove **spring-arm covers (6)** from both sides of the spring-arm.
3. Wrap the contacts on the **signal cable (4)** with adhesive tape to protect them.
4. Push the **signal cable** about 25 cm into the **reinforced flexible tube (7)**. At the same time, hold the tube at a distance of approximately 20 mm.
5. Squeeze the tube together and pull it through the extension arm, until the **signal cable (4)** is visible at the **plastic ribbing (8)** on the extension arm side.
6. Pull the **signal cable** in a loop downwards, and out on extension arm side.
7. For details of how to install the **semi-circular bracket** please see the separate HANAULUX 2000 Installation Instructions, Chapter 8.1.5.

8 Secure the **grounding wire (9)** in the opening of the semi-circular bracket with the screw supplied.

DANGER!

Failure to secure the grounding wires could result in electric schock. Always securely connect up the grounding wires.

9. Install the **round cover** (2) with the screw (1)



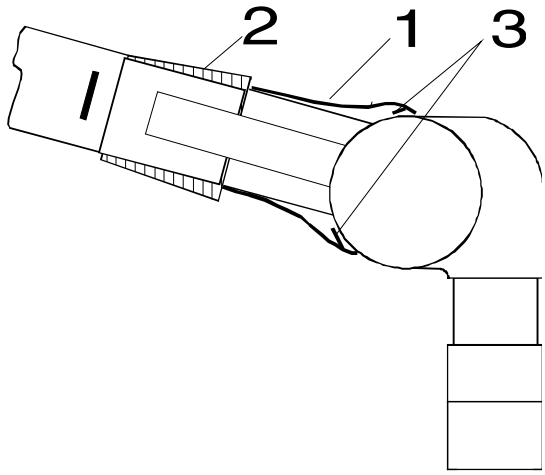
1 Fixing screw
2 Round cover
3 Semi-circular bracket
4 Signal cables
5 Screw
6 Plastic covers
7 Reinforced flexible tube
8 Plastic ribbing
9 Grounding wire

Fig. 10.3-2: Installing the semi-circular bracket to the spring-arm

10.3.8 Mounting the metal Flaps
Fig. 10.3-3

1. Push the **metal flaps (1**) under the plastic ribbing of the plastic covers. At the same time note the direction of the nose (3)
2 Push the **metal flaps (1)** into the joint until it clicks.
3. Mount the **plastic covers** and secure them with the fixing screw.

DANGER! Should the plastic covers or the fixing screw fall down during the operation, this could have sever repercussions. When assembling the plastic covers, always secure them with the fixing scew.



1 Steel clips
2 Plastic ribbing
3 Nose

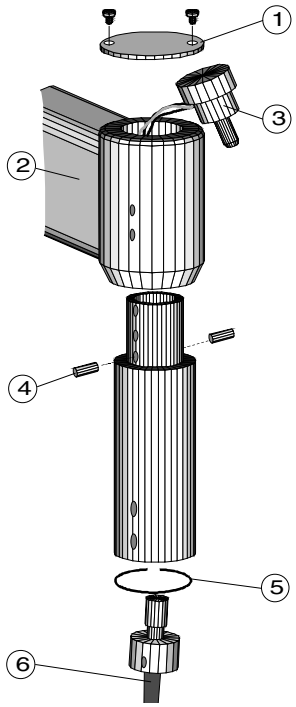
Fig: 30. 3-3 Mounting the metal flaps

10.3.9 Preparing the installation of the spacer to the extension-arm
Fig. 10.3-4

1. Remove **round cover (1)** from the top of the **extension-arm (2)**.
2. Pull **electrical connector (3)** in extension-arm up and out of the arm and place to one side.
3. Punch out **securing pins (4)** in spacer with hammer and punch. Remove **circlip (5)** and pull out **connector and wiring 6)** from underneath.

10.3.10 Installing the spacer to the extension-arm

For details of how to install the spacer to the extension-arm please refer to the HANAULUX 2000 Installation Instructions, Chapter. 5.1.



1 Round cover (extension-arm side)
2 Extension-arm
3 Connector
4 Securing pins
5 Circlip
6 Connector with wiring (spacer)

Fig 10.3-4: Preparing the installation

10.3.11 Installing the spring-arm with semi-circular arm to the spacer

Fig. 10.3-5

1. Lock spring-arm by screwing black locking bolt tight.
2. Gently guide the **electrical and signal cable from the spring-arm (1)** through the **spacer (2)** and pull the cable out of the top of extension-arm.
3. Guide the **spring-arm axle (3)** into the **spacer opening (4)**.

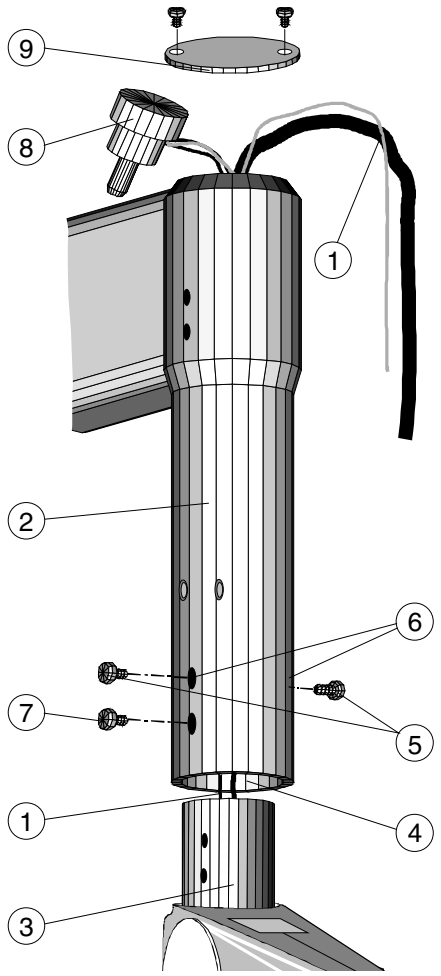
COMMENT!
Make sure that the die drill holes in the spring-arm axle line up with those in the spacer.
On one side there is only there is only one drill hole.

4. Screw the two **fixing screws (5)** into the two upper **drill holes (6)**.
5. Screw the **brake screw (7)** into the lower drill hole in the spacer.

10.3.12 Electrical connections

Fig.10.3-6 and 10.3-7

1. Guide signal cable through the extension-arm and pull out through the opening in the rectangular extension-arm cover.
2. Cut off the **connector (8)** from the electrical wiring in the extension-arm and mount end sleeves to wires.
3. Connect up wiring to terminal block as shown in fig. 10.3-6.
4. Position terminal block in the extension-arm and secure with fixing screws. Screw **round cover (9)** into place on the top of the extension-arm.



1 Electrical wiring and signal cable in spring-arm
2 Spacer
3 Spring-arm axle
4 Spacer opening
5 Fixing screws
6 Drill holes
7 Brake screw
8 Connector
9 Cover

Fig. 10.3-5: Installing the spring-arm with semi-circular arm to spacer

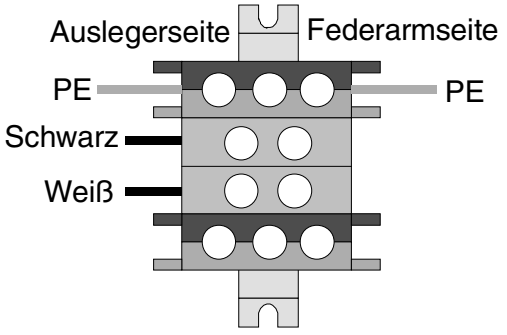


Fig. 10.3-6: Connecting up the terminal block in the extension-arm

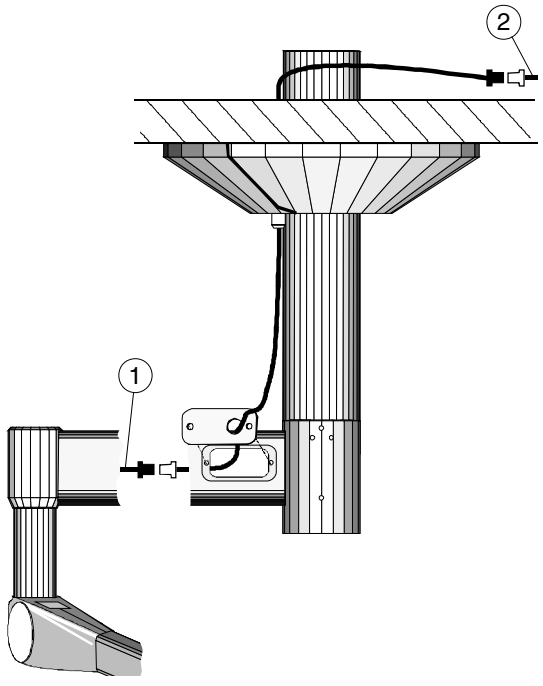
10.3.13 Connecting up the connector **Fig.10.3-7**

1. Connect up the **signal cable (camera) in the extension-arm (1)** and the **camera wiring at the flange tube (2)** as follows using the 12-pole connectors supplied (Tab.10.3-2):

Pin	Colour	Signal
1	Black	Zoom / Focus
2	Brown	GND
3	Green	AF-ON
4	Yellow	C-OUT
5	Orange	C-OUT (GND)
6	Grey	Y-OUT (GND)
7	White	Y-OUT
8	Free	Free
9	Free	Free
10	Blue	-
11	Red	+
12	Transparent	GND

Tab. 10.3-1: Signal cable designation

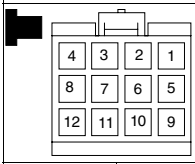
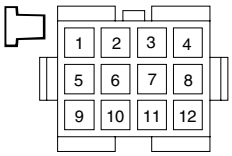
2. Connect up cable in extension-arm and at flange tube. Screw rectangular cover into place using fixing screws.



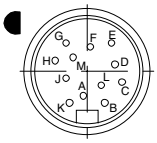
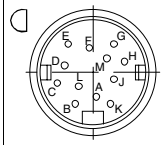
1 Signal cable in extension-arm
2 Camera wiring at flange tube

Fig. 10.3-7: Connecting up the cables

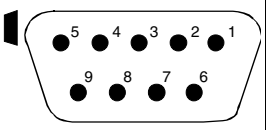
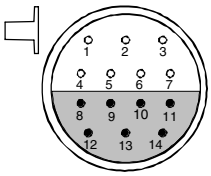
10.3.14 Male and female connector designation

AMP Male connector		**AMP Female connector**	
			
Pin 1	sw / *black*	Pin 1	sw / *black*
Pin 2	br / *brown*	Pin 2	br / *brown*
Pin 3	gn / *green*	Pin 3	gn / *green*
Pin 4	ge / *yellow*	Pin 4	ge / *yellow*
Pin 5	or / *orange*	Pin 5	or / *orange*
Pin 6	gr / *grey*	Pin 6	gr / *grey*
Pin 7	ws / *white*	Pin 7	ws / *white*
Pin 8		Pin 8	
Pin 9		Pin 9	
Pin 10	bl / *blue*	Pin 10	bl / *blue*
Pin 11	rt / *red*	Pin 11	rt / *red*
Pin 12	GND	Pin 12	GND

Tab. 10.3-2: AMP Male and Female

Male Binder		**Female Binder**	
			
Pin G	Zoom Focus	Pin G	Zoom Focus
Pin F	GND	Pin F	GND
Pin E	AF - ON	Pin E	AF - ON
Pin H	C - OUT	Pin H	C - OUT
Pin M	C - OUT GND	Pin M	C - OUT GND
Pin L	Y - OUT GND	Pin L	Y - OUT GND
Pin D	Y - OUT	Pin D	Y - OUT
Pin A		Pin A	
Pin B		Pin B	
Pin J	(-)	Pin J	(-)
Pin C	(+)	Pin C	(+)
Pin K	GND	Pin K	GND

Tab. 10.3-3: Male and Female Binder Connectors

SUB-D-Male connector			Lemi-Combi-coupling (14 pole)	
				
Pin 1	sw / *black*		Pin 1	Zoom Focus
Pin 2	br / *brown*		Pin 2	GND
Pin 3	gn / *green*		Pin 3	AF - ON
Pin 4	ge / *yellow*		Pin 4	C - OUT
Pin 5	or / *orange*		Pin 5	C - OUT GND
Pin 6	gr / *grey*		Pin 6	Y - OUT GND
Pin 7	ws / *white*		Pin 7	Y - OUT
Pin 8	bl / *blue*		Pin 8	
Pin 9	rt / *red*		Pin 9	
Gehäuse	GND		Pin 10	(-)
			Pin 11	(+)
			Pin 12	GND
			Pin 13	
			Pin 14	

Tab. 10.3-4: SUB-D-Male connector and Combi-Coupling

10.3.15 Installing the camera in the housing **Fig. 10.3-8**

1. Install **short distance lens (12), filter adaptor (11**) and **lens hood (9) (Simatic S)**

COMMENT!	Failure to install the short distance lens can result in poor picture quality

1-CCD camera :

2. Fig 10. 3-8 B shows the mounting of a 1-CCD camera. The holder for the camera is fixed in the upper position with three **M4 cylinder-head screws (3)**.

3-CCD camera :

2. Remove the four **M4 allen screws (4)**. Mount two **space plates (5)** and **slot plate (6)** under the **angle plate (7)**. Fix the holder for the camera in the lower position with three **M4 cylinder-head screws (3)**.
3. Unfold **Dlens hood (9)**
4. Secure camera in housing using **knurled screw (8)**,such that the **lens hood (9)** sits snug against the housing.
5. Insert **Sub-D connctor** in the camera and screw tight.
6. Replace second half of housing and secure with fixing screws.
7. Mount **handle (10)** to holder.

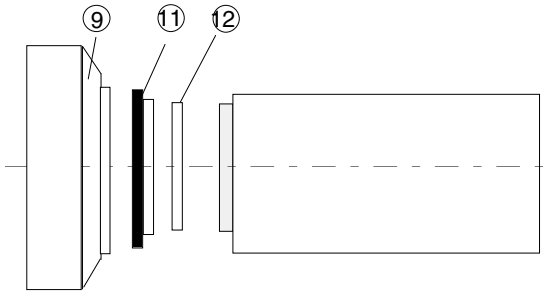


Fig. 10.3-8 A*: *Mounting of short distance lens, filter adaptor, and lens hood

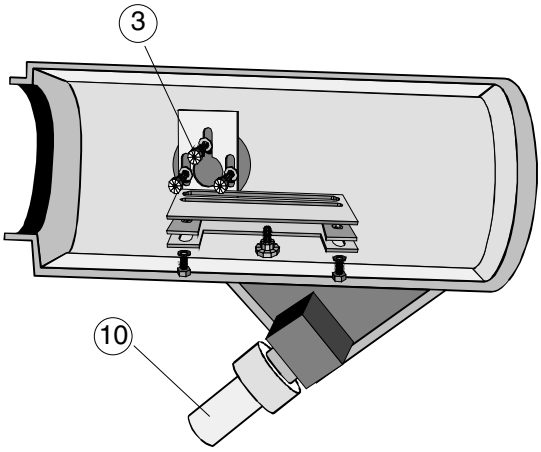


Fig. 10.3-8 B: Mounting 1-CCD camera

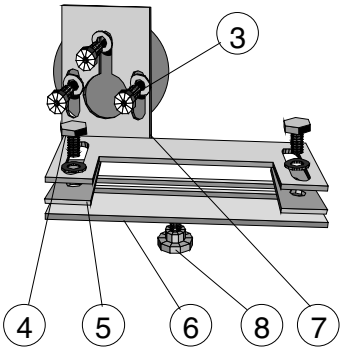


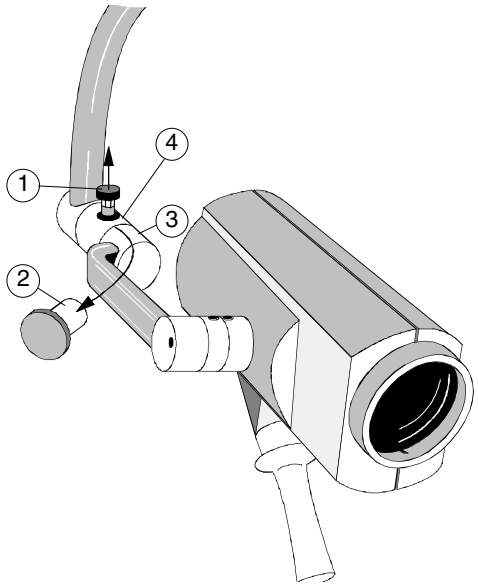
Fig. 10.3-8 C: Mounting 3-CCD camera

1 fixing screws
2 Protective disc
3 M4 cylinder-head screws
4 M4 allen screws
5 space plates
6 slot plate
7 angle plate
8 Knurled srew
9 lens hood (Simatic S)
10 handle
11 filter adaptor
12 short distance lens

Fig. 10.3-8: Installing the camera in the housing

10.3.16 Installing camera to semi-circular bracket
Fig. 10.3-9

1. Pull up **quick coupling bolt (1)** and remove **stopper (2)**.
2. Guide **camera axle (3)** into the opening in the opening in the **semi-circular bracket (4)** so that both grooves line up.
3. Snap quick coupling bolt back into place.



1 Quick coupling bolt
2 Stopper
3 Camera axle
4 Axle on semi-circular arm

Fig. 10.3-9: Installing camera to semi-circular bracket

10.3.17 Connecting up the periphery appliances
Fig. 10.3-10

Figure 10.3-10 shows a complete overview of the HANAUVISION System wiring.

ATTENTION!
All periphery appliances (monitor, videorecorder) must be connected up in accordance with the respective installation instructions.

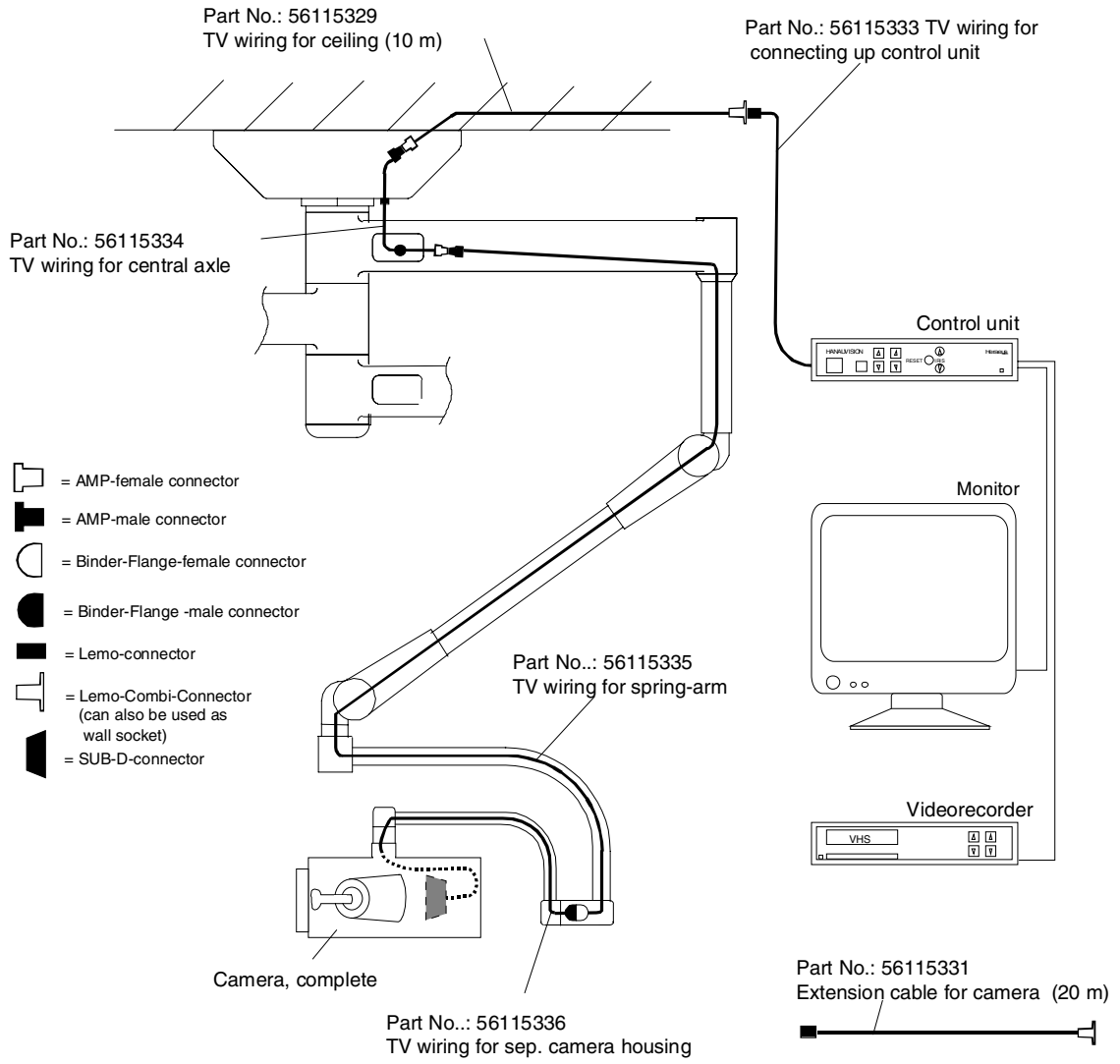


Fig. 10.3-10: Connecting up the periphery appliances and wiring schematic

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